

# **EFFICIENT USE OF DOMAIN SOCKET PAIRS IN COMMUNICATION FOR TIGHTLY COUPLED TRANSACTIONS**

## **ABSTRACT**

A gateway provides communication of tightly coupled XA transactions to a server hosting a DBMS and makes efficient use of domain socket pairs to implement demultiplexing in the gateway. The gateway includes a TCP/IP listener process which accepts connection requests from a transaction manager. Logical agents represent the application connection and are managed by a logical agent scheduler and are passed within the gateway using domain socket pairs. Gateway agents are dedicated to identified tightly coupled XA transactions to provide tightly coupled XA transaction support for DBMS systems which do not provide such support directly. The domain socket pairs in the gateway are assigned to logical agent schedulers and are available in a domain socket pool. A wait queue is provided to buffer logical agents when connection to the server is not available or where there are no domain socket pairs available in the domain socket pool. The wait queue is itself implemented as a domain socket pair.

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